

Claims

1. A method of screening for therapeutic agents useful in the treatment of a disease comprised in a group of diseases consisting of hematological diseases,
5 cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising the steps of
 - i) contacting a test compound with a KLK9 polypeptide,
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 - ii) detect binding of said test compound to said KLK9 polypeptide.
2. A method of screening for therapeutic agents useful in the treatment of a disease comprised in a group of diseases consisting of hematological diseases,
15 cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising the steps of
 - i) determining the activity of a KLK9 polypeptide at a certain
20 concentration of a test compound or in the absence of said test compound,
 - ii) determining the activity of said polypeptide at a different
25 concentration of said test compound.
3. A method of screening for therapeutic agents useful in the treatment of a disease comprised in a group of diseases consisting of hematological diseases,
cardiovascular diseases, neurological diseases, metabolic diseases, urological
30 diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising the steps of

- 122 -

- i) determining the activity of a KLK9 polypeptide at a certain concentration of a test compound,
- ii) determining the activity of a KLK9 polypeptide at the presence of a compound known to be a regulator of a KLK9 polypeptide.
4. The method of any of claims 1 to 3, wherein the step of contacting is in or at the surface of a cell.
5. The method of any of claims 1 to 3, wherein the cell is in vitro.
6. The method of any of claims 1 to 3, wherein the step of contacting is in a cell-free system.
7. The method of any of claims 1 to 3, wherein the polypeptide is coupled to a detectable label.
8. The method of any of claims 1 to 3, wherein the compound is coupled to a detectable label.
9. The method of any of claims 1 to 3, wherein the test compound displaces a ligand which is first bound to the polypeptide.
10. The method of any of claims 1 to 3, wherein the polypeptide is attached to a solid support.
11. The method of any of claims 1 to 3, wherein the compound is attached to a solid support.
12. A method of screening for therapeutic agents useful in the treatment of a disease comprised in a group of diseases consisting of hematological diseases,

cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising the steps of

- 5 i) contacting a test compound with a KLK9 polynucleotide,
- ii) detect binding of said test compound to said KLK9 polynucleotide.
13. The method of claim 12 wherein the nucleic acid molecule is RNA.
- 10 14. The method of claim 12 wherein the contacting step is in or at the surface of a cell.
- 15 15. The method of claim 12 wherein the contacting step is in a cell-free system.
- 16 16. The method of claim 12 wherein polynucleotide is coupled to a detectable label.
- 17 17. The method of claim 12 wherein the test compound is coupled to a detectable label.
- 20 18. A method of diagnosing a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising the steps of
- 25 i) determining the amount of a KLK9 polynucleotide in a sample taken from said mammal,
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- 124 -

- ii) determining the amount of KLK9 polynucleotide in healthy and/or diseased mammals.

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19. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising a therapeutic agent which binds to a KLK9 polypeptide.
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20. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising a therapeutic agent which regulates the activity of a KLK9 polypeptide.
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21. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising a therapeutic agent which regulates the activity of a KLK9 polypeptide, wherein said therapeutic agent is
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- i) a small molecule,
 - ii) an RNA molecule,
 - iii) an antisense oligonucleotide,
 - iv) a polypeptide,
 - 30 v) an antibody, or
 - vi) a ribozyme.

22. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising a KLK9 polynucleotide.
23. A pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising a KLK9 polypeptide.
24. Use of regulators of a KLK9 for the preparation of a pharmaceutical composition for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal.
25. Method for the preparation of a pharmaceutical composition useful for the treatment of a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal comprising the steps of
- i) identifying a regulator of KLK9,
 - ii) determining whether said regulator ameliorates the symptoms of a disease comprised in a group of diseases consisting of hematological

- 126 -

diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases in a mammal; and

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iii) combining of said regulator with an acceptable pharmaceutical carrier.

26. Use of a regulator of KLK9 for the regulation of KLK9 activity in a mammal having a disease comprised in a group of diseases consisting of hematological diseases, cardiovascular diseases, neurological diseases, metabolic diseases, urological diseases, cancer disorders, inflammation disorders, dermatological diseases and gastroenterological diseases.
- 10